

From: glowbugs@sco.theporch.com Sat Mar 8 22:34:05 1997
Return-Path: <glowbugs@sco.theporch.com>
Received: from sco.theporch.com (sco.theporch.com [192.150.244.23])
by uro.theporch.com (8.8.5/AUX-3.1.1)
with ESMTP id WAA12614 for <shimshon@uro.theporch.com>;
Sat, 8 Mar 1997 22:34:04 -0600 (CST)
From: glowbugs@sco.theporch.com
Received: from sco.theporch.com (localhost [127.0.0.1])
by sco.theporch.com (8.8.5/SCO-5.0.2) with SMTP
id EAA13207; Sun, 9 Mar 1997 04:33:40 GMT
Date: Sun, 9 Mar 1997 04:33:40 GMT
Message-Id: <199703090433.EAA13207@sco.theporch.com>
Errors-To: ws4s@infoave.net
Reply-To: glowbugs@sco.theporch.com
Originator: glowbugs@sco.theporch.com
Sender: glowbugs@sco.theporch.com
Precedence: bulk
To: Multiple recipients of list <glowbugs@sco.theporch.com>
Subject: GLOWBUGS digest 468
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@sco.theporch.com
Status: 0

GLOWBUGS Digest 468

Topics covered in this issue include:

- 1) CPCW-5
by "Brian Carling" <bry@mail1.mnsinc.com>
- 2) Re: 6AQ5 AS DET.
by toyboat@freenet.edmonton.ab.ca
- 3) Re: Headfone (tin can) polarity
by iii@bighorn.dr.lucent.com
- 4) Re: 6AQ5 AS DET.
by "Brian Carling" <bry@mail1.mnsinc.com>

Date: Sat, 8 Mar 1997 10:42:30 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@sco.theporch.com
Subject: CPCW-5
Message-ID: <199703081541.KAA23898@news2.mnsinc.com>

I spoke with WB1EYE, Carl on the phone yesterday and he told me that he is using a power transistor to CATHODE MODULATE his CAKE PAN CW-5 transmitter and gets 100% modulation that way. Sounded like a nifty scheme. I will let you all know how he did it if I can

get a schematic!

You don't hear much about cathode modulation, but I don't see any reason why it can't be done in a lot of other transmitters!

Bry

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*****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/ *
*****
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Date: Sat, 8 Mar 1997 13:14:37 -0700 (MST)
From: toyboat@freenet.edmonton.ab.ca
To: Leon Wiltsey <leeboo@ct.net>
Cc: Multiple recipients of list <glowbugs@sco.theporch.com>
Subject: Re: 6AQ5 AS DET.
Message-ID: <Pine.A41.3.95.970308121229.56044B-1000000@fn2.freenet.edmonton.ab.ca>

On Fri, 7 Mar 1997, Leon Wiltsey wrote:

> Didnt get many answeres to my question does a 6aq5
> power pentode make a good regen det. I need a det that will go into
> osc smoothly. Oh yes how much plate and screen volts to use?

Hello,

There is an article in the mid-1950s QST, as well as in the "How to Become a Radio Amateur, 1961" which describes a 6AQ5 regen set, using two 6AQ5's as detector and audio. I believe the author/designer was Don Mix.

I haven't built it but would assume it must have worked well or it wouldn't have ended up in the "H.T.B.A.R.A., 1961" as a standard beginner's receiver project.

This set uses 250 VDC / 50 mA. as the plate supply, although I think that this higher voltage was because it works with a companion transmitter and common power supply in the "H.T.B.A.R.A., 1961" booklet.

One glitch of this higher plate voltage is that the set needs a wire-wound rheostat (50K/4W) in series with a fixed resistor (150K/1W) for screen grid regeneration control. Those rheostats are rather

expensive and not easy to obtain, I believe.

Also, as a pentode detector regen, it uses the tapped-coil approach, instead of the tickler-coil approach. This set uses B+W coils of low inductance, with a bandset variable of 420 pF. (140pF bandspread). The antenna coupling link is a larger diameter of B+W coil stock positioned around one end of the main coil. It always looked rather unpleasant to fabricate these coils to me, and the factory-produced base-mounted, plug-in units in the parts list have gone the way of the Dodo bird.

I have seen other pentode detector regens using the 6U8A (6GH8A) which operate at 125 VDC, and I think that the 6AQ5 would work nicely at this voltage too. This also eliminates the need for the wire-wound rheostat in favor of a standard full-size radio-TV linear-taper pot for regen control. The Don Mix(?) circuit looks like it would happily work at 125 VDC with the screen regen pot/rheostat and fixed resistor values altered. The 6AQ5 audio stage is very simple and looks like it would work fine without alteration at 125 VDC.

You would still have to fabricate a substitute for the air-wound B+W tapped regen coils, however. The 6U8A set uses them as well.

You could also tie the screen grid to the plate to make your 6AQ5 a triode in the circuit, and use a standard 48-90 VDC tickler coil detector circuit. I remember R.D. Keys mentioning using 6F6/6V6/6L6 tubes in such a manner with very good success. The 6AQ5 is a 7-pin miniature version of the 6V6 octal, and electrical data for it is the same, so it should perform the same, I would assume. Likewise, a triode-connected 6AQ5 audio stage would permit the same 48-90 VDC power source as the detector.

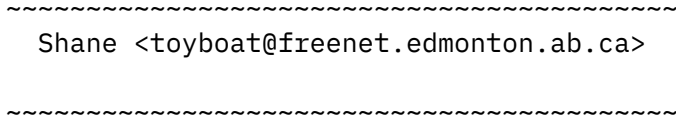
My RCA tube manual shows the following for a 6AQ5 as a triode-connection: (plate @ 250VDC, control grid @ -12.5 VDC)

Amplification Factor - 9.5
Plate Resistance----- 1970 ohms
Transconductance----- 4800 micromhos
Plate mA.----- 49.5 mA.

At 50VDC on the plate, plate mA is about 15 ma. for 0VDC on the control grid. The operation at this level looks quite linear, as well as at higher plate voltages.

It compares favorably with 6J5's and similar true triodes, I think.

Hope this helps,
Shane Wilcox



Bob,

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>           I have one pair of Western Electrics that are mostly dead
> on one side but fine on the other, and the wiring is intact.  This one
> might be a dud diaphragm or a dead magnet, but I don't suspect the
> magnet, right off.  Diaphragm corrosion is more likely.
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Swap the diaphragms between the two sides. If the problem follows the diaphragm, you know that is the problem. If it doesn't, you can suspect the magnet.

Gabe Sellers KG0NR
gsellers@lucent.com
nr Denver, Colorado

Date: Sat, 8 Mar 1997 18:42:01 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@sco.theporch.com
Subject: Re: 6AQ5 AS DET.
Message-ID: <199703082341.SAA18180@news2.mnsinc.com>

Speaking of 6AQ5s does anyone know if a 6095 is the same thing?

I have one of those (Sylvania) and some other Japanese tube, and they both LOOK like a 6AQ5.

On 8 Mar 97 at 20:18, toyboat@freenet.edmonton.ab.c spoke about Re: 6AQ5 AS DET. and said:

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> Hope this helps,  
> Shane Wilcox
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> ~~~~~
>      Shane <toyboat@freenet.edmonton.ab.ca>
>
> ~~~~~
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*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
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End of GLOWBUGS Digest 468
